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CONJUGATED LINOLEIC ACID COMPOSITIONS

RELATED APPLICATIONS

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This application is continuation-in-part of USSN 09/132,593, filed 8/11/98, and USSN 09/160,416, filed 9/25/98, now abandoned which is a continuation-in-part of USSN 09/042,538, filed 3/17/98, now abandoned, and USSN 09/042,767, filed 3/17/98, now US 6,015,833, all ~~now pending and~~ incorporated herein by reference.

FIELD OF THE INVENTION

The present invention relates to the field of human and animal nutrition, and in particular to certain novel compositions of conjugated linoleic acids (CLA). These compositions are prepared according to a novel method that controls isomerization of 9,12-linoleic acid.

BACKGROUND OF THE INVENTION

In 1978, researchers at the University of Wisconsin discovered the identity of a substance contained in cooked beef that appeared to inhibit mutagenesis. The substance was found to be a mixture of positional isomers of linoleic acid (C18:2) having conjugated double bonds. The c9,t11 and t10,c12 isomers are present in greatest abundance, but it is uncertain which isomers are responsible for the biological activity observed. It has been noted from labelled uptake studies that the 9,11 isomer appears to be somewhat preferentially taken up and incorporated into the phospholipid fraction of animal tissues, and to a lesser extent the 10,12 isomer. (See Ha, *et al.*, *Cancer Res.*, 50: 1097 (1991)).

The biological activity associated with conjugated linoleic acids (termed CLA) is diverse and complex. At present, very little is known about the mechanisms of action, although several preclinical and clinical studies in progress are likely to shed new light on the physiological and biochemical modes of action. The anticarcinogenic properties of CLA have been well documented. Administration of CLA inhibits rat mammary tumorigenesis, as demonstrated by HA, *et al.*, *Cancer Res.*, 52: 2035s (1992). Ha, *et al.*, *Cancer Res.*, 50: 1097 (1990) reported similar results in a mouse forestomach neoplasia model. CLA has also been identified as a strong cytotoxic agent against target human melanoma, colorectal and breast